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Myrtle Beach, South Carolina  
April 7-11, 1999

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# **Proceedings of the Academy of Free Enterprise Education**

**April 7-11, 1999  
Myrtle Beach, South Carolina**

**Jo Ann and Jim Carland  
Co-Editors  
Western Carolina University**

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# Proceedings of the Academy of Free Enterprise Education

## Table of Contents

ESTABLISHING A THEORETICAL FOUNDATION FOR USING COLLABORATIVE LEARNING TO TEACH ENTREPRENEURS .....	1
Daniel J. Borgia, Florida Gulf Coast University Gerald J. Segal, Florida Gulf Coast University	
A NEW FREE ENTERPRISE CURRICULUM: ETHICS BASED COURSES FOR STUDENTS IN FREE ENTERPRISE .....	2
Frederick DiUlus, University of North Florida	
SELF-EFFICACY THEORY AND EXPECTANCY THEORY: WHICH BETTER EXPLAINS COLLEGE STUDENT ENTREPRENEURIAL INTENTIONS? .....	3
Gerald J. Segal, Florida Gulf Coast University Gerald Schoenfeld, Florida Gulf Coast University	
COLLEGE STUDENTS WITH CREDIT CARDS - A SURVEY AND A TEACHING INSTRUMENT .....	4
Marsha R. Shelburn, University of South Carolina Aiken William L. Shelburn, University of South Carolina Aiken	
THE CHANGING PERSPECTIVE OF ENTREPRENEURIAL THINKING: OPINIONS AND RECOMMENDATIONS OF HUMAN RESOURCE MANAGERS .....	11
Calvin Shipley, Henderson State University James Tatum, Henderson State University	
PORTFOLIO SIMULATION TECHNIQUES IN EQUITY VALUATION AND PORTFOLIO MANAGEMENT: SOME PEDAGOGICAL ISSUES .....	19
James Stotler, North Carolina Central University	

# **ESTABLISHING A THEORETICAL FOUNDATION FOR USING COLLABORATIVE LEARNING TO TEACH ENTREPRENEURS**

**Daniel J. Borgia, Florida Gulf Coast University  
Gerald J. Segal, Florida Gulf Coast University**

## **ABSTRACT**

*For many years, entrepreneurship educators have found that the most effective pedagogical methods for teaching students are active learning techniques. Active learning strategies would include methods such as student teams collaborating on the development of new venture business plans, small business consulting projects, case analyses, and other team-oriented activities. The purpose of this article is to introduce collaborative learning findings from the education literature to establish a theoretical foundation for these methods of teaching entrepreneurship. This will enable entrepreneurship educators to deepen their understanding of the collaborative learning process and thereby enhance their teaching effectiveness.*

# **A NEW FREE ENTERPRISE CURRICULUM: ETHICS BASED COURSES FOR STUDENTS IN FREE ENTERPRISE**

**Frederick DiUlus, University of North Florida**

## **ABSTRACT**

*The paper addresses the development of teaching models and curriculum for the delivery of Free Enterprise education courses at the collegiate level. Faculty and administrators alike may ask when considering new course proposals “what’s in it for me” or “what’s in it for the university”? It is in this environment, often skewed or influenced by an accrediting agency’s influence for certain types of courses, evidenced most recently by the rise in content rich “international” applications, that faculty, department chairs, deans and university presidents, often find themselves. As a result, Free Enterprise education course designs may succumb to the so-called conventional wisdom which suggests “it’s not worth the effort” or worse the linkage of the words “free enterprise” to radical right wing political thinking.*

*This study, however, shows the contrary, that Free Enterprise course development is worth the effort, is politically neutral, attractive to students of all collegiate levels and reaps measurable economic benefits to sponsoring colleges and universities. An almost immediate interest can and will be developed among students once exposed to the advantages of the free enterprise system and what it means to each of them personally. Secondly, multiple examples of the enormous public relations benefit which accrues to the university are illustrated along with how this normally immeasurable benefit is brought about mostly through student initiated community action and recognition programs. And lastly, the potential high-end financial value which may accrue to any institution which adopts the program is shown as a means of overcoming potential operating and growth dilemmas-an issue of increasing long-term concern to every college and university.*

*This paper brings focus to the methodology for the development of a Free Enterprise curriculum and the development of teaching models for the effective delivery in introductory and advanced Free Enterprise courses; particularly at the undergraduate level. The study views how the curriculum was created and adopted in a major public university and illustrates the residual benefits, noted above, that came as a result of two years of development. Moreover, the paper shows how these models can be adopted by any college or university both to introduce and challenge students with an education in Free Enterprise while also giving them real world experience with it. The model curriculum proposed is phased in over an academic year. It provides opportunity for each year of a student’s program. The advanced courses, by design, evidences high degrees of concentration in honesty and integrity. A student’s ethical consciousness is, under the curriculum design, critical to the success of the program, particularly to those, who in turn, will teach Free Enterprise to others; children, young adults and the disenfranchised entering, learning and awakening to the potential of the Free Enterprise system for the first time.*

# **SELF-EFFICACY THEORY AND EXPECTANCY THEORY: WHICH BETTER EXPLAINS COLLEGE STUDENT ENTREPRENEURIAL INTENTIONS?**

**Gerald J. Segal, Florida Gulf Coast University**  
**Gerald Schoenfeld, Florida Gulf Coast University**

## **ABSTRACT**

*The research seeks to determine factors explaining the intentions of students to become entrepreneurs (i.e., start a business). Prior research (Chen, Greene and Cricks, 1998) found that higher process self-efficacy, based on the respondents' confidence to perform 20 specific entrepreneurial tasks, led to higher levels of entrepreneurial intentions. Our research will first replicate the Chen, et al study using a sample of business students at Florida Gulf Coast University.*

*In addition, our research will use a modified version of expectancy theory (Vroom, 1964) to predict entrepreneurial intentions. Our student survey will ask respondents to rate the probability (expectancy) of achieving desirable entrepreneurial outcomes identified in the entrepreneurship literature. They will also be asked to rate the personal importance or value (valence) of each outcome. Drawing from expectancy theory, we will multiply expectancy times valence to arrive at a measure of entrepreneurship motivational strength. We hypothesize higher levels of entrepreneurship motivational strength leads to higher levels of entrepreneurial intentions.*

*We posit that strong self-efficacy is a necessary, but not sufficient, predictor of entrepreneurial intentions. Individuals who feel very confident to perform entrepreneurial tasks may eschew a self-employment career, possibly because they find outcomes resulting from self-employment insufficiently motivating or even de-motivating. Therefore, we hypothesize that expectancy theory will predict entrepreneurial intentions more strongly than self-efficacy theory.*

## **COLLEGE STUDENTS WITH CREDIT CARDS - A SURVEY AND A TEACHING INSTRUMENT**

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### **ABSTRACT**

*This paper presents a questionnaire designed to investigate credit card use and views of college students, then reports data collected from a convenience sample of 132 students at University of South Carolina Aiken. The students were asked in a confidential manner to report their experiences with and views on credit card use. The data provide information on the students' decision-making processes, their uses and abuses of credit, and their attitudes toward the marketing practices to which they did or did not succumb. Finally, the authors explain how this sort of research project can be employed as a valuable learning device in a statistics, marketing, ethics, or economics course.*

### **INTRODUCTION AND NATIONAL STATISTICS**

How old is old enough for credit card use? Is it ethical to market credit cards to traditional college-age students? Should colleges allow credit card representatives to pay their way onto campus to recruit students? How well does the average college student understand the small print in the credit card application? Do college students realize how expensive credit card debt can be? How large a problem is credit card abuse among college students? There is a growing literature that addresses such topics.

According to a September 1998 article in *Money* magazine (v27, n9, p156), two-thirds of all college students have at least one credit card and 20% have four or more. Approximately 41% of students carry a non-zero balance, compared to approximately 60% of the total population. Interest rates charged to students average something close to 20% on an annual basis. Over half (approximately 51%) of all credit cards nationally are Visa cards; that is likely true on college campuses as well. Recent data report that a typical undergraduate has \$2200 in credit card debt (bankrate.com, p.1).

Credit card issuers target college students via marketing techniques which include: free products (T-shirts, etc.); fees for student groups to get their peers to accept credit cards; use of detailed student data (sometimes purchased from the college) in calling on students; booths set up during college orientation activities; brochures in student union racks; and circulars included with bookstore purchases. Schools sometimes take fees/percentages to allow promotional activities/literature on campus. Promotional campaigns often emphasize that students can receive four-

figure credit lines without parents co-signing (Knight-Ridder/Tribune News Service 9/20/96 page 920k6652).

Credit card ads/applications are also available on the Internet. While not clearly targeted to college students, college students are more likely to use the Internet (80% report Internet use) than non-students.

Consumer advocates use crack house analogies to criticize the marketing methods used by credit card issuers to “hook” college students. Marketing analysts explain that credit card companies target college students in particular because studies show that people in transition are more likely to change their behaviors (and begin credit card use, e.g.). Not only that, when college students graduate, they have higher expected lifetime earnings and spending than the non-graduate population. The states of New York and Massachusetts are considering laws to ban credit card marketers from campuses.

### **PURPOSE**

This paper presents the results of a convenience sample of students at USC Aiken, where the authors are on the faculty. Students’ use of credit cards and their views on controversial credit card issues are reported. Finally, the authors suggest ways that other faculty members could use such a credit card survey as a teaching instrument.

### **A CONVENIENCE SAMPLE OF USC AIKEN STUDENTS**

The authors report the results of a convenience sampling of students, which was designed to provide data on their credit card habits and attitudes. The survey instrument is included as Figure 1. The students were enrolled in two economics classes, two business and society classes (a core course for business administration majors), two upper-level marketing classes, and one education course at a small four-year public campus (USC Aiken) in South Carolina during the Spring 1999 semester. Usable responses were obtained from 131 students, fifty-seven females and seventy-four males. Of those, 103 were twenty-five years of age or younger; of those, 60 were male and 43 female. Sixty-four of the 103 were juniors or seniors.

### **SURVEY RESULTS**

While results of the authors’ convenience sample of USCAiken students are not likely to be representative of outcomes for all campuses, they probably do shed some light on college student use of credit cards and student attitudes toward credit cards. Because most of the controversies surrounding college student credit card use are age-related, the authors confine their attention in this paper to those 103 students (out of 131) who were less than 25 years of age. Of those, fifty (49%) said they had one or more general-purpose credit cards. Visa and MasterCard were the most commonly held; 21 of 103 students (20%) listed more than one general purpose credit card. Students who lacked credit cards most commonly reported no need for one (see Figure 1), but a substantial portion (23%) of those without cards did indicate that they wanted to avoid the temptation to



overspend. Twenty-eight percent of those without cards reported that their parents did not want them to use credit cards.

According to respondents, the marketing technique most likely to attract a college-aged credit card customer was a mail solicitation, but on-campus representatives are successful, too (Figure 2). Are students good credit card consumers? Of the credit card holders in our survey, 40% reported that their card selection reflected an informed comparison of terms. Eleven percent relied on their parents. Thirty-eight percent depended mainly on some other criterion, such as credit limit or ready availability. This suggests that there is ample opportunity on campus for credit card education!

The need for better informed students is suggested, as well, by the fact that approximately 82% of respondents considered credit card advertising misleading and 17% of the users said they should never have accepted a credit card. Figure 4 shows that approximately 33 percent of credit card holders admit living beyond their means and consistently paying the monthly minimum. At interest rates in the teens or higher on total balances (estimated by respondents at \$32,915), the 29 students with non-zero balances are probably spending more than \$6000 per year in interest. Six of the students with credit cards were carrying balances that exceeded 20% of their annual income.

### **AS A TEACHING INSTRUMENT**

The authors suggest that administration of the survey and analysis of the resulting data set would constitute an excellent assignment for students in the following courses: introductory statistics, business ethics, marketing, consumer economics. In a statistics class, possible learning objectives would include procedures for sampling (a scientific sample, rather than the convenience sample whose results are reported here, would be feasible with many students sharing the survey task); data summary methods; and hypothesis testing. Each class member could be required to survey students in a prescribed manner, then all student survey results combined into one file accessible via diskette or Local Area Network for analysis by the class, teams, or individual students. In the ethics class, the focus might be what the results of such a survey reveal about student views on the ethics of credit card marketing techniques. A marketing course could determine the most successful credit card marketing techniques for students of different ages, genders, majors, etc.; the economics class could analyze the decision process faced by students in deciding to use a credit card and what constitutes credit card abuse. Where statistics is a prerequisite for other courses, the data set generated in the statistics course could be used again in the other courses to discuss the pertinent marketing, ethics, or economics issues.

For a statistics or marketing course, the student would benefit from a requirement to devise his(her) own questionnaire. The authors recommend from experience, however, that the instructor provide class time and guidance for the synthesis of individual ideas into a standard form to be tested, modified as necessary, then used by all students. (Students without extensive experience in questionnaire design are likely to write questionnaires that generate ambiguous and inadequate data. On the other hand, the failure to collect worthwhile information with their own surveys might be a valuable learning experience!)

To avoid the limitations of a convenience sample when using this survey as a class project, the instructor could discuss with the class the concept of scientific sampling and provide carefully specified sampling instructions for all students. If written questionnaires are to be distributed and

collected by students in the course, confidentiality measures should be carefully arranged. Sampling times, dates, locations, and procedures (e.g., every seventh student that passes within ten feet of the surveyor who has not previously participated) should be agreed. Then, data could be combined to form a large, scientific sample for the campus. The advent of the Local Area Network on most campuses greatly facilitates both the compilation of data collected by individual students and its dissemination to the entire class. Hypothesis tests, as well as summary statistics/graphs, would be valid with scientific sampling. Ready access to Microsoft Excel and other such spreadsheets with data analysis capabilities enables students to generate interesting and impressive reports.

In addition to the graphs and summary statistics generated and reported in this paper, students conducting a scientific sample of their campus population might be required to do hypothesis testing to determine whether various percentages and/or means (the percentage of students holding credit cards, the percentage having non-zero balances, the mean balance of credit card holders on campus, etc.) are significantly different from corresponding national figures. They could also be asked to test for significant differences in credit card use/views between female and male students.

## CONCLUSIONS

The results of the survey for the USCAiken campus are not inconsistent with national data, since some variation from campus to campus is to be expected. It does appear that credit card use is somewhat lower (49% compared to 66%) at USCAiken than on the typical campus. This could be because more students still live with their parents and have no need of their own credit cards. This might also explain in part why only 20% of USCA students have more than one credit card, while 20% have more than four credit cards nationally.

The concern in the literature that credit card use by college students can give rise to problems is consistent with responses reported here, particularly since 17% said they wished they had never used credit cards. The need for education by parents and others is supported by the fact that 80% of our respondents considered credit card advertisements misleading and only 40% reported that they made their own well-informed comparison of terms before selecting which card to use. Further, sixteen of our respondents reported that they did not know the interest rates they were paying on their non-zero credit card balances.

A primary virtue of this credit card project as a teaching instrument arises from its relevance to the student's life. In fact, the authors initially realized the level of student interest in credit card issues when a student organization decided to adopt the subject for an educational project. It provides an economic decision-making experience that is of value even to the poorest student or to those whose parents pay their bills. Enough students have gotten in trouble with their credit cards that they provide first-person testimonials as to what can happen.

The marketing techniques currently in vogue to sell credit cards to college students are diverse, creative, and controversial. Marketing students can learn from such a survey which ones work best for students at their institution. Studies over time are likely to demonstrate the rising importance of Internet marketing of credit cards. (Only one student in the authors' survey reported a role for the Internet in his credit card decision.)

Ethical issues pervade credit card usage by college students. An obvious one is whether colleges and universities should collect fees by providing access to students and/or their student

profile information. Indeed, one might question the ethics of credit card companies marketing credit lines to young people at 20% interest rates in such a low-inflation economy.

Thus, this one project provides ample opportunity for students to gain proficiency in statistical techniques. At the same time, the students will learn basic economic decision-making principles, see examples of successful and aggressive marketing, and argue about the ethics associated with credit cards that can represent either great convenience or easy indebtedness for their users.

Editor's Note: Figures available from author

## REFERENCES

Alderman, Lesley. "This Twentysomething Must Start Getting Real." Money, June 1997, vol. 26, no.6, p130(3)

Lazarony, Lucy. "Credit Cards Teaching Students a Costly Lesson." <http://www.bankrate.com/brm/news/cc/19980605.asp>

Phillips, B. J. Credit Cards Can be Dangerous in College Students' Hands." Knight-Ridder/Tribune News Service. September 20, 1996, p920K6652.

Rose, Sarah. "Prepping for college Credit." Money, September 1998, vol. 27, no.9, p156(2)

## FIGURE 1: CONFIDENTIAL QUESTIONNAIRE

If you do not use any credit cards, please circle all those items that explain your decision to avoid credit card use, *then skip to question 9*:

I do not need one.

I am afraid I would spend too much if I accepted a credit card.

I do not know how to get my own credit card.

I have been turned down when I applied for credit cards.

My parents discourage my credit card use.

Other \_\_\_\_\_

If you do have one or more credit cards, which one of the following best describes how you selected your credit card(s)?

I was mainly concerned whether the company would let me have a credit card.

I tried to find the credit card with the best terms, but comparing terms (interest rates, annual charges, etc.) was too confusing/difficult.

I was concerned with my credit limit more than with the terms (interest rate, annual charge, etc.).

Annual fees and interest charges were clear when I accepted the credit card(s); I carefully selected the best deal.

My parents provided/recommended a particular one.

a. Other \_\_\_\_\_

Circle all of the following that encouraged you to choose your credit card(s):

On-campus credit card representative(s)

Mail advertising/offers of credit cards

Telephone offer(s) of credit cards

Other \_\_\_\_\_

If you use credit cards, list all the “general purpose” credit cards ( such as MasterCard, Visa, Discover, or American Express) that you currently use:

#1 \_\_\_\_\_

#2 \_\_\_\_\_

#3 \_\_\_\_\_

#4 \_\_\_\_\_

What rate of interest is charged on unpaid balances for each of the cards that you listed in item 2 above? (Write “unknown” if you do not know.)

Credit Card #1 \_\_\_\_\_

Credit Card #2 \_\_\_\_\_

Credit Card #3 \_\_\_\_\_

Credit Card #4 \_\_\_\_\_

Approximately how large is the total of all unpaid balances on the credit cards listed above? (If you pay all charges in full each month, please write zero below.)

\_\_\_\_\_

Circle **all** of the following that describe your use of these credit cards:

I need/want to purchase items, but my income is not sufficient. With credit cards, I pay only the minimum amount due each month. It is easy to “borrow” this way.

Other family members (spouse, parent, or other relative) receive the credit card bill(s) and pay for the items that I charge.

I travel a lot and need the convenience of the cards.

Interest charges never accrue to my credit card accounts because I pay them in full each month.

I am a victim of aggressive marketing/advertising and never should have started using these credit cards. I cannot afford to pay off my balance(s).

I am glad that I can "borrow" using credit card(s) because my income will rise greatly when I graduate. Other loans are unavailable or too much trouble to arrange.

I wish I had never started using credit cards.

8. Approximately how much do you owe in other charge accounts at retail outlets (such as Sears, Dillard's, Penney's, Belk's, furniture stores, auto dealerships)? \_\_\_\_\_

9. Please describe yourself:

Gender: Male\_\_\_\_ Female\_\_\_\_

Year of Birth: \_\_\_\_\_

Class: Fr.\_\_\_\_ Soph.\_\_\_\_ Jr.\_\_\_\_ Sr.\_\_\_\_

Approximately what is your annual income? (NOTE: If you share a credit card account, report the income of the family unit responsible for paying the charges on your credit card.)

\_\_\_\_\_

11. Do your parents have credit cards? yes\_\_\_\_ no\_\_\_\_ don't know\_\_\_\_

12. Do you think it is ethical for credit card companies to offer cards to young people without the signature of a responsible adult?

under age 21? yes\_\_\_\_ no\_\_\_\_

under age 18? yes\_\_\_\_ no\_\_\_\_

13. Do you think credit card advertising techniques purposely mislead young people about credit card costs? yes\_\_\_\_ no\_\_\_\_ don't know\_\_\_\_

# **THE CHANGING PERSPECTIVE OF ENTREPRENEURIAL THINKING: OPINIONS AND RECOMMENDATIONS OF HUMAN RESOURCE MANAGERS**

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## **ABSTRACT**

*The purpose of management education is to prepare business graduates to function successfully in the new entrepreneurial environment. This requires that they develop skills in entrepreneurial thinking including being innovative, proactively searching for opportunities, looking beyond the usual or customary solutions to problems, seeking potentially profitable risks and being willing to change.*

*To supplement an earlier study of alumni opinions and recommendations regarding entrepreneurial thinking, a survey of human resource managers was conducted to determine the employer's perspective and current management policies and practices. Their opinions on the importance of entrepreneurial attitudes and skills for individual and organizational success are also presented as well as their recommendations for improving entrepreneurial thinking skills are reported.*

## **INTRODUCTION**

Entrepreneurship has been one of the driving forces contributing to the success of the American economy in the 1990's. According to one authority on organization theory, the 1970's was the decade of the "managerial man." The emphasis was placed securing a position of power by climbing the corporate ladder. Now the corporate climber has been replaced by the self-starter, the entrepreneur who starts his own business. Current literature indicates that some large, well established organizations are beginning to develop and nurture the entrepreneurial drive within their company (Jennings, 1987).

This study reviews the literature with regard to the emergence of entrepreneurship as a broad driving force in corporations and seeks to ascertain to what degree companies' human resource management policies and practices reflect this "new" corporate entrepreneurial interest. The paper concludes with human resource managers' recommendations for improving entrepreneurial thinking skills through management education curricula.

## TRENDS

Entrepreneurs are responsible for many significant contributions in the United States. Entrepreneurs have proven to be vital to the U.S. economy by providing leadership, innovation, and research and development effectiveness. These entrepreneurs are responsible for job creation through the development of new industries. This has led to a sense of renewal not only in management philosophy but also in the greater economy and society. It is interesting to note that in 1993, the majority of the nearly 2 million millionaires in the U.S. had obtained their wealth through entrepreneurial activity. One may not realize the impact of entrepreneurship on the U.S. economy but it is difficult to ignore when considering that in 1991 over 1 million enterprises were launched in the U.S. Not even a majority of the net new jobs were created by large, established companies but stemmed from these new and expanding firms. (Timmons, 1994) From 1988 to 1990, small firms have created all of the new jobs in the economy and most of this growth has occurred in firms with fewer than 20 employees. (Small Business Administration, 1992)

According to one authority, large companies are awakening to the fact that entrepreneurship is not just for new and small companies. The concept can be applied in older and larger companies, in slower growing or troubled companies, and in nonprofit or government organizations. (Timmons, 1994)

Due to the success of many new businesses entering the market, many larger companies are studying the strategies and policies of these new companies. The startling realization is that these businesses are utilizing a basic business principle that has been part-and-parcel of the folklore of the free enterprise system since the beginning of time. Their strategies are not long or complicated; they are fundamental principles. It is the superstructures of organizations which have made strategies overly complicated. A collection of such fundamental strategies is as follows:

- "Profit is the name of the game."
- "Build a better mousetrap."
- "The customer is always right."
- "Either you run the business or it will run you."
- "People, not organization charts, make businesses."
- "If you want to be successful, make others successful." (Hanan, 1979)

Mack Hanan (1979), author of *Fast Growth Strategies*, urges large business to take heed of what can be learned of these new enterprises. In his message to CEOs and presidents, he tells them that their companies must be dedicated to growth and to involve people throughout the organization in the process. Hanan (1979) feels that management should "adapt their organization and operations to become more supportive to entrepreneurial managers."

John F. Welch, Jr., chairman of General Electric Company, recognizes the significance of corporate entrepreneurship noting that, "Size is no longer the trump card it once was in today's brutally competitive world market place--a market place that is unimpressed with logos and sales numbers but demands, instead, value and performance. " Welch's goal with regard to managing the \$60 billion plus General Electric: to "get that small-company soul--and small-company speed-- inside our big-company body." (Byrne, 1993)

According to *Business Week's* John Byrne (1993), what Welch and so many other executives with large enterprises are trying to do is to tap what he calls the "economies of entrepreneurship." Byrne gives other examples of companies that are embracing the concept of corporate entrepreneurship. These include:

- Xerox deploys a venture fund to bankroll internally generated ideas that previously were discarded or overlooked.
- MCI Communication Corporation's chief executive appears on closed-circuit TV network to give impassioned talks on the merits of entrepreneurship.
- PepsiCo, Inc., hoping to get all its employees acting like small-business owners, dishes out stock options to janitors and secretaries.
- Phillips Electronics is allowing employees to pitch new ideas to a committee of top executives responsible for funding approval, much as an entrepreneur would. (Byrne, 1993)

There is evidence that there are some larger, well established corporations that have embraced Byrne's (1993) "economies of entrepreneurship." Its purpose is to encourage and entrepreneurial spirit, in both management and employees, throughout the company. The question is whether or not, and to what degree, corporate practices are reflecting anecdotal evidence in the literature. The current study was designed to determine if this trend is reflected in human resource policies and practices and to solicit opinions of human resource managers with regard to techniques and methods effective in infusing students with entrepreneurial skills.

## SURVEY RESULTS

In the summer of 1998, surveys were mailed to the approximately 200 members of the Arkansas Human Resources Association. The purpose was to examine the opinions and recommendations of those individuals intimately and actively involved in the hiring and evaluation of job performance for graduates in the business world. A total of 39 survey instruments were returned for a response rate of about 20 percent. Information on the types of firms represented and the firm's size, as measured by number of employees, is given below in Table 1.



TABLE 1	
FIRM TYPE	PERCENT
Manufacturing	33.3
Retail	0
Financial	10.3
Service	36.8
NonProfit/Government	20.5
Other	5.1
EMPLOYEES	PERCENT
Less than 50	5.1
50 to 99	7.7
100 to 149	12.8
150 to 199	12.8
200 or more	61.5

Respondents were also asked to classify their firm on a continuum from Bureaucratic (1) to Entrepreneurial (5) (see Table 2). The mean response was 2.97 which is midway on the scale. The symmetric distribution of responses reinforces the conclusion that most of the respondents do not perceive their firms to be extremely bureaucratic or entrepreneurial.

TABLE 2		
		PERCENT RESPONDING
Bureaucratic	1	12.8
	2	23.1
	3	28.2
	4	25.6
Entrepreneurial	5	10.3

Respondents were also asked to give their opinions on the importance of entrepreneurial thinking (as defined for the survey) to several areas of success. The resulting distribution of responses is given in Table 3 below.

TABLE 3						
IMPORTANCE OF ENTREPRENEURIAL THINKING						
	PERCENT RESPONDING					Total
	Yes 1	2	3	4	No 5	
To the individual's success in the firm	30.8	25.6	41.0	2.6	0	100
To the success of the firm	48.7	28.2	17.9	5.1	0	100
To the success of the college graduate	56.4	33.3	7.7	2.6	0	100

It is interesting to note the difference in the importance of entrepreneurial thinking to the success of the firm (with nearly 50 percent responding with a definite "Yes") and the individual's success within the firm (over 40 percent responding "Somewhat" and just over 30 percent saying "Yes.") After merging the "3" and "4" responses because expected frequencies were too low, a Chi-square goodness-of-fit test indicated a significant difference in the distribution of responses for importance of entrepreneurial thinking to "individual success" and "firm success." The implication is that the firm's employees can succeed without being as "entrepreneurial" as the firm needs to be to succeed. This contradiction may spell difficulties for such organizations in the future. The Chi-square test showed there was no significant difference in the response distribution for "firm success" and "the general success of the college graduate." The respondents also indicated that business schools should develop graduates with an entrepreneurial orientation (more than 90 percent responded in the "Yes" to "Somewhat" range).

Given the growing importance of entrepreneurship as described in the literature and its importance to the firm, as indicated by human resource managers, it is interesting to note that relatively few of the respondents' firms have any formal plan to develop an entrepreneurial environment within the company. Just under a quarter (23.1 percent) of the human resource managers responding indicated that their firm had developed a formalized plan to encourage an entrepreneurial environment within the firm. Although a relationship was not testable, an examination of Table 4 indicates larger firms were less likely to have a formal plan in operation.

TABLE 4		
FIRM SIZE	NUMBER OF FIRMS	
	Formal Plan	No Formal Plan
Less than 200	5	10
200 or more	4	20

Almost 60 percent of respondents listed activities, formal or informal, which their firms used to develop an entrepreneurial environment. Among the activities firms used to promote an entrepreneurial environment were awards for employee suggestions (8 of 39 firms) and the use of the team approach to problem solving (7 firms). Three respondents noted cases in which the firm allowed the manager some independence in operating the unit as a profit center with financial rewards for growth. Other ideas mentioned were training and brainstorming activities and flexible job descriptions and scheduling. Of those responding to whether activities such as these were reflected in hiring practices were about evenly divided (48.3 percent responded "Yes").

Respondents were also asked whether they considered themselves to be "entrepreneurial thinkers." The response distribution is described in Table 5 below.

TABLE 5				
Are you an "entrepreneurial thinker"?				
PERCENT RESPONDING				
Yes	Somewhat			No
1	2	3	4	5
25.6	33.3	33.3	7.7	0

The mean response was 2.23, indicating as the distribution does, that these respondents felt themselves to be more "entrepreneurial" than not. This result may be due to a response bias in the survey. However, if their perceptions are correct, this adds increased importance to their opinions about how schools of business can work to develop such an attitude in our graduates.

When asked what college courses would contribute to preparing entrepreneurial thinkers, a variety of courses, both business and non-business, were mentioned. The most commonly listed courses are shown in Table 6 below. In addition, both economics and finance were mentioned by about one-third of the respondents. Among non-business courses listed, by far the most common courses mentioned were in communications and people skills development.

TABLE 6	
COURSE	PERCENT RESPONDING
Strategic Management	74
Business Communications	61
Basic Marketing	59
Basic Management	48

When asked about teaching methods and techniques which would contribute most to entrepreneurial thinking skills, responses were very consistent, as shown in Table 7.

TABLE 7	
TEACHING TECHNIQUE	PERCENT RESPONDING
Preparing business plan	74.4
Team assignments	74.4
Internships/Field trips	64.1
Case studies	64.1
Role playing/simulations	64.1

Research assignments were mentioned by just over one-half of the human resource managers responding. Also mentioned were mentoring programs with local business people and "entrepreneur shadowing" experiences. These recommendations could be incorporated into existing internship programs and provide a more direct "entrepreneurial" focus.

The responding human resource managers also offered recommendations for improving the "entrepreneurial thinking" skills of business graduates. About 30 individual recommendations were given. Of these, approximately 20 percent mentioned activities associated with "real-world" experiences. Included here were projects where students work as consultants on an actual problem facing a real business with faculty serving as mentors. Activities designed to foster creativity and teaching a variety of problem solving and communications skills each accounted for another 20 percent of these responses. One particular recommendation seems worthy of note for management curriculum development--emphasize that entrepreneurial thinking skills are needed for success in *all* types and *all* sizes of business firms.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the survey results, it is concluded that

- Entrepreneurial thinking skills are important for the success of firms, regardless of their type or size. Large organizations seem less likely to have formal plans for creating an entrepreneurial environment within the company.
- Entrepreneurial thinking is important to the success of graduates in general, although it appears to be less important to individual success within the firm according to the responding human resource managers. This may be due to the relatively low proportion of firms in the survey that have formal policies and practices for generating an entrepreneurial attitude within the organization.

In order to improve entrepreneurial thinking skills, and therefore, the success of the individual and the business organization, schools of business should do the following:

- Continue the current emphasis in those courses such as strategic management, management communications, marketing and basic management which the respondents indicated were most helpful.
- Expand real world "consulting" experiences for students in these and other classes.
- Expand the use of those teaching methods--such as preparing business plans and team assignments--which the human resource managers indicated were most beneficial in developing entrepreneurial thinking skills.
- Expand coverage of entrepreneurial topics into other courses which currently appear to contribute relatively little to the entrepreneurial perspective.

Finally, in addition to educational activities designed to improve the "entrepreneurial attitude" of business graduates, schools of business should undertake an "educational effort" to enlighten businesses of all sizes and types about the benefits, in fact the necessity, of developing entrepreneurial thinking throughout the organization. Schools should also share with those business organizations those practices and policies which can help develop these entrepreneurial thinking skills for employees.

### REFERENCES

- Byrne, J. (1993). Enterprise: how entrepreneurs are reshaping the economy--and what big companies can learn. *Business Week 1993 Special Bonus Issue--Enterprise*, 10-18.
- Hanan, M. (1979). *Fast growth management: how to improve profits with entrepreneurial strategies*. New York: AMACOM.
- Jennings, D. (1987). *Self made women: twelve of America's leading entrepreneurs talk about success, self-image and the superwoman*. Dallas: Taylor Publishing Company.
- Small Business Administration. (1992). *The state of small business: a report of the president, transmitted to congress, 1992*. Washington, D.C.: U.S. Government Printing Office.
- Timmons, J.A. (1994). *New venture creation*. Boston: Irwin.

# PORTFOLIO SIMULATION TECHNIQUES IN EQUITY VALUATION AND PORTFOLIO MANAGEMENT: SOME PEDAGOGICAL ISSUES

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## ABSTRACT

*Many of the topics taught in finance and investments classes are closely related to the topics of securities valuation and portfolio management. In the past, students typically selected or were assigned a stock or stocks to value and perhaps tracked the performance of a few stocks over the course of the semester. There are several portfolio simulations available today which can facilitate this process. They generally increase student learning and interest in the topic while reducing confusion and burdensome record keeping. This paper examines some instructional techniques which can be used with portfolio simulations in the finance classroom as well as some SIFE (Students in Free Enterprise) projects which utilize portfolio simulations.*

## THE NATURE AND OBJECTIVES OF A PORTFOLIO SIMULATION

Portfolio simulation services typically get a periodic download of prices from one or several exchanges. The downloads may occur once a day or several times a day. These prices then represent the transaction price when the simulated order is received. Transactions are usually posted to the accounts at regular intervals throughout the day or at the end of the day, but do not typically occur in real time. Some simulations incorporate a commission fee and some assume no commissions.

Most student oriented simulations on the Internet charge a fee to the student and provide more services or options than the free simulations which are not usually student oriented. Some permit telephone and fax trades in addition to online transactions. Individual portfolio statements are usually provided to the instructor for distribution to the participants about once a week and the instructor receives an instructor summary. The individual portfolio statements show all securities bought and sold as well as the current market value of the securities in the portfolio as of the statement date.

The objectives of the portfolio are not set by the simulation so the instructor can provide the students with a stated objective for the portfolio or allow the student to select his or her own objective. Each has its advantages and disadvantages and there are certain portfolio construction and management topics which cannot easily be illustrated using a simulation in a classroom environment. The following are some objectives which a portfolio manager might establish:

1. Short-term maximization of the wealth position without constraints
2. Long-term maximization of the wealth position without constraints
3. Maximization of the return on equity for the portfolio
4. Providing stable income or maximizing current income.

5. Maximizing wealth subject to an asset allocation which must be maintained
6. Maximizing wealth subject to spending or distribution requirements of a client
7. Maximizing wealth subject to social responsibility considerations of a client.

One of the difficult aspects of using a portfolio simulation in a one semester course is that it is often not possible to establish realistic objectives for the students. In the world of investment management, a typical objective may be to maximize capital gains in the long run subject to an acceptable level of risk established by the client. When the simulation period is limited to a single semester the goal of steady long term growth becomes unsuitable. As a result, students typically focus on short term capital gains which have not been difficult to obtain in recent conditions.

Other objectives and constraints could be imposed by the instructor, but to enable meaningful comparisons among students, all students should be subject to the same goals and constraints. A possible goal would be to provide a certain level of income to the client which could involve weekly or monthly withdrawals while maintaining the original principle. This would be similar to the management of an endowment fund. Since additional cash injections are usually not possible with simulation services, it would be difficult to simulate a pension fund where contributions and withdrawals were being made simultaneously.

In terms of constraints, the student managers could be subject to asset allocation constraints determined by the risk tolerances of a client or mandated by the client. For this situation a case could be given to each student or a group of students and they could be evaluated based on how well they meet the needs of the client relative to some benchmark. The constraints could be established in terms of an asset allocation consistent with the client's risk tolerances or simply statements made by the client such as "no investment in companies that produce tobacco or alcohol products". This would help make the simulation more like what the student is likely to encounter when working in the field of investment management.

### **INCENTIVES AND GRADING**

In most cases, students tend to delay selecting investments to include in their portfolios. To encourage students to invest a reasonable large portion of their funds early in the semester, bonus points (in addition to a grade for the written report) can be awarded for the highest returns. This encourages competition and usually gets most students to invest early. One possible bonus point scenario is to divide the class into quartiles and award 10 points to the top portfolio, 7 points to those in the top 25%, 5 points to the second 25%, 2 points to the third 25% and no points to the bottom quartile.

In recent market conditions, a few students who invested early in some hi tech and Internet related stocks saw their portfolio values soar. This left some of those who had not yet invested somewhat discouraged since they felt they could not recover or compete with the other portfolios. The above bonus point scenario tends to work well because it gives all students an incentive to avoid being in the bottom quartile.

## THE PORTFOLIO SIMULATION REPORT

Aside from creating and managing a portfolio during the semester, students should be required to prepare a written report on the simulation. Since the report tends to be quite lengthy and time consuming, it often works best to require a midterm “progress” to assure that each student is actively monitoring the portfolio and collecting the data needed to prepare the final report. To avoid a situation where market conditions could determine a student's base grade, the simulation report should be graded separately from the bonus points awarded for portfolio performance. This enables even the worst performing portfolio to receive an excellent grade on the written report by indicating a solid understanding of why the portfolio behaved as it did and suggesting what could have (or should have) been done to improve the performance of the portfolio.

As a general guideline, the written report should include at least the following elements:

1. *Justification for each trade*  
Each time a transaction is made the student should justify the trade based upon a strategy which was either selected by the student or set by the instructor. In some cases, justification may be waived on the initial purchases to encourage students to invest a reasonable high percentage of their funds early in the semester.
2. *Analysis of the gain/loss over the holding period*  
Since the holding period for the typical one semester course is quite short, the holding period return is generally the appropriate return measure. The holding period for each investment will usually be different and cash balances typically earn a nominal return just under the risk free rate. Computation of the holding period return is simplified by the fact that there are no inflows or outflows as there would be with a pension or endowment fund.
3. *Discussion of recent Value Line or S&P Report*  
A discussion of a recent analysts' report should be included in the student's report. This would include both a company report and an industry report. These reports also serve as a source for the stock's beta and other information such as dividends and earnings. Also, the Value Line or S&P reports can help students make their initial investment decisions at the start of the simulation.
4. *Daily price history for each stock*  
Requiring a daily price history for each stock in the portfolio enables the instructor to correlate the discussion of events with market price reactions. Daily price histories can easily be obtained via the Internet.
5. *Computation of the portfolio beta after each trade or at periodic intervals*  
The portfolio beta is a measure of how a particular portfolio tends to behave relative to the market. Transactions designed to raise or lower the portfolio beta would be



made as a result of expectations about the direction of the market. In the event of a very limited number of trades, the portfolio beta should be computed on a frequent and regular basis (perhaps weekly or daily). This is important because it allows the student to see that the portfolio beta can change frequently even when no transactions are being made and a rebalancing of the portfolio weights may be necessary.

6. *Computation of the percent invested after each trade*  
As noted above, the portfolio beta may change even though no transactions took place. This is because the percent invested in each stock fluctuates as the market prices change over time. As a result, the percent invested in each stock (as well as the total percent invested) should be computed regularly.
7. *Summary of important events affecting each stock during the holding period*  
This section would include key events which had an impact on the price of the company's stock during the holding period. This would include events like mergers, changes in management, lawsuits and analysts' ratings changes.
8. *Industry analysis for each industry*  
There will usually be several industries represented in the portfolio. An industry analysis should be prepared for each industry represented. This would include industry average financial ratios and key events affecting the entire industry.
9. *Summary of key economic events during the holding period*  
This would include events which were not company or industry specific such as interest rate changes, inflation and unemployment and other macroeconomic events.
10. *Ratio Analysis*  
A summary of key financial ratios should be prepared. These ratios are then evaluated using trend and industry analysis to assess the condition of each company, both over time and relative to the other firms in the industry. The DuPont identity is especially useful in identifying strengths and weaknesses within a company.

## **PROBLEMS AND LIMITATIONS**

Simulations do not usually trade all stocks in the market so students may be unable to trade certain stocks. Some simulations prohibit trades in stocks under a certain price (usually five dollars) and limit transaction size in some way. The trader may be limited to half of the daily volume or shares outstanding.

Probably the most significant limitation when using simulations in a class is the limited time period which is usually restricted to about 14 weeks. This makes it difficult to pursue a diversified long term growth strategy and students are forced to focus on short term gains. This usually involves a very high risk, undiversified portfolio which is the opposite of what they would typically face in a real world portfolio management situation.

Finally, simulations do not allow for inflows and outflows during the investment period. This is not realistic since most investment management situations involve funds with inflows and outflows such as pensions and endowments. Pensions would have inflows from currently employed participants and outflows to retired participants. Endowments would have outflows to beneficiaries and may or may not have inflows.

### **SIFE PROJECTS**

There are different ways to use portfolio simulations as SIFE projects. Such projects would typically be conducted in a high school setting and involve student participation in the creation and management of a portfolio. The portfolio could be used to demonstrate the investment process, diversification or efficiency.

Assembling the portfolio is critical to maintaining student interest. If it contains stocks that the students are not familiar with it will be difficult to keep their interest. Business Week recently referred to this generation of students as generation Y. A generation Y portfolio can easily be assembled and capture the interest of the students. Such a portfolio would contain stocks of companies the students are familiar with such as Coca Cola, Pepsi, Tommy Hilfiger, and America Online for example. While such a portfolio may hold their interest it will not help to illustrate the concept of diversification or efficiency.

A dartboard portfolio could be assembled to illustrate the concept of efficiency. This would probably not be as interesting to the students so it could be done in conjunction with a generation Y portfolio. The drawback with trying to illustrate the concept of market efficiency is that with the limited time period you may not get the desired result. Regardless of the concept being illustrated the students will become more familiar with investing and trading.